

SIDELIGHTS FROM ZOOLOGY ON BOTANICAL
NOMENCLATURE¹

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IN a recent article ("Official Plant Names?" in *RHODORA* **52**: 1-7, 1950), Dr. F. R. Fosberg has discussed some of the implications in efforts to add a list of conserved names of species to the rules of botanical nomenclature. His discussion is in accord with an earlier one by Dr. Albert C. Smith ("A Legislated Nomenclature for Species of Plants?" in *Amer. Journ. Bot.* **36**: 624-626, 1949). Dr. Fosberg remarks, "One of the most inevitable evils that would arise under such a scheme would be an attempt to substitute decision by authority for taxonomic research. . . . Under even the best-informed authority this would be an intolerable infringement of freedom of research." He adds further, "In repeated conversations with non-taxonomic users of botanical names it has become very evident that the annoyance with name changes is an indiscriminate one. . . . There is sometimes resentment even of cases resulting from increased taxonomic knowledge. . . . There are matters that cannot be settled by legislation any more than the principles of genetics can be regulated by the decisions of political commissars."

Systematic botanists are generally unaware of how far their zoological brethren have gone toward the acceptance of authoritative (in the sense of dictatorial, not of specially competent) and arbitrary decisions by a handful of individuals. It may seem strange to botanists that an 18-man Commission (the number now to be increased) is empowered to abrogate ("suspend") the zoological rules altogether at any time for any specific item, to exclude certain publications from consideration, or to designate types of genera and higher groups without simultaneous taxonomic study. Those who have a nodding acquaintance with such small and taxonomically rather simple groups as the birds or mammals are likely to have an illusory impression that systematic zoology is stabilized and orderly, in very favorable contrast with the condition of systematic botany, and are apt to attribute this to the rules of nomenclature rather than to the

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subject matter. It is worth citing an example from the invertebrates, in which complications equal to any in botany have arisen, and have been aggravated by an authoritative ruling. V. S. L. Pate, in "The Generic Names of the Sphecoid Wasps and Their Type Species (Hymenoptera: Aculeata)" (Memoirs of the American Entomological Society No. 9, 1937), has the following discussion of the typification of *Sphex* Linnaeus (l. c., pp. 83–85):

"As type of the Linnaean genus *Sphex*, Latreille in 1810 proposed *Sphex flavipennis* Fabricius, 1793, a species not described until five years after Linnaeus' death. Nevertheless, in spite of this, the name *Sphex* was used almost uniformly in the sense of Latreille for nearly a hundred years until [Henry Torsey] Fernald in 1905 called attention to this error, discussed it at some length, [and] designated *Sphex sabulosa* Linnaeus, 1758 as type of *Sphex* Linnaeus, 1758, a decision with which the International Commission on Zoological Nomenclature concurred in rendering Opinion 32. . . . *Sphex* Linnaeus, 1758 thereby became isogenotypic with *Ammophila* Kirby, 1798, which fell as an absolute synonym and *Chlorion* Latreille, 1802, as the next oldest name in the group, was resurrected to be used for *Sphex* Auctt. nec Linnaeus. Recently the Commission while still of the opinion that *Sphex sabulosa* Linnaeus is the type of *Sphex* Linnaeus, 1758, but likewise, as a result of representations brought before them, presumably convinced that strict application of the rules in this case might apparently cause greater confusion than uniformity, proposed to suspend the rules and recognize as valid Latreille's designation of *Sphex flavipennis* Fabricius, 1793 as the type of *Sphex* Linnaeus, 1758. If this course is followed, the name *Sphex* reverts to the group . . . which has laterly been known as *Ammobia* Bilberg, 1820. *Ammophila* Kirby, 1798, is then resurrected for *Sphex* in the sense of Linnaeus and Fernald. However, as an immediate corollary of this proposed action, *Sphex*, as the Commission now advocates that it should be used, must be accredited to Latreille, presumably 1810, for only by the most specious sophistry may the name still continue to be attributed to Linnaeus. Moreover, *Sphex* Latreille nec Linnaeus, 1758, is a homonym, no matter how the case is reviewed, and as such, is invalid. Its validity is entirely dependent upon the dubious authority of a commission whose personnel must inevitably change from time to time. There is no guarantee that future commissions will not abrogate the proposed decision as readily as the present body now proposes in effect to annul that of its predecessor. It is needless to point out further the absurdity of following the procedure which the commission now proposes to advocate, that by this action they tend to vitiate such powers as they have, that in effect they nullify all preceding opinions and tend to destroy the foundations upon which the Zoological Code is founded. Their abject capitulation to the plea of temporal expediency in this instance is most certainly ill advised. Four or five decades ago the vertebrate zoologist underwent the same nomenclatorial travail that the entomologist is now undergoing. The mammalogist, the ornithologist, and the remaining vertebrate confraternity have apparently survived this period of labour. The entomologist, however, is fast approaching that condition which will soon permit him to be classed as one of those animals which are his chief concern."

Surprising though it may seem to many, botanists have grounds for pride in the history of the development of their rules of nomenclature, which have been more extensively worked out and more universally accepted for a longer time than those of the zoologists. Not until 1905 were the zoologists able to publish an international set of rules of nomenclature, and the present Code, which must serve the vast fields of entomology and protozoology as well as vertebrate zoology, amounts to only 35 articles. Contrast this with the botanical rules, whose adoption in 1905 in more or less their present form had been preceded by nearly forty years of publication and wide acceptance of two major sets of rules, and which at present include 74 articles, together with numerous recommendations, examples, and appendixes. The interested reader is referred to "A Discussion on the Differences in Observance Between Zoological and Botanical Nomenclature. 2. The Case for the Zoologists," by Francis Hemming (Secretary of the International Zoological Commission), Proc. Linn. Soc. London **156**: 134-137, 1944. The zoological Code is reprinted in "Procedure in Taxonomy," by Edward T. Schenk and John H. McMasters, revised edition, published in 1948 by Stanford University Press. (This book deals only with systematic zoology, primarily the field of paleontology, and not with the broad subject of taxonomy as the title implies.)

Botanists have perhaps some grounds for comfort in knowing that the zoological rules are now in process of more drastic revision than the botanical ones have seen in more than a third of a century. (See "Important Advances in Zoological Nomenclature Achieved at 13th International Congress of Zoology," by Francis Hemming, Science n. s. **108**: 156-157, Aug. 13, 1948.)

Botanists may be surprised by certain of the autocratic requirements in the zoological code regarding orthography. Article 3 states, "The scientific names of animals must be words which are either Latin or Latinized, or considered and treated as such in case they are not of classic origin." Nevertheless, Article 20 states, "In forming names derived from languages in which the Latin alphabet is used, the exact original spelling, including diacritic marks, is to be retained. Examples: . . . *möbiusi*, . . . *čžžeki*, . . . *färöensis*." In partial contradiction, a recommendation under this same article reads, "In proposing

new names based upon personal names which are written sometimes with ä, ö, or ü, at other times with ae, oe, and ue, it is recommended that authors adopt ae, oe, and ue." A lengthy Appendix F to the Code "indicates the manner in which Greek words should be transliterated." But this legislative gesture of acquiescence in good scholarship is counteracted by Article 14c, paragraph 3: "If the name is a modern patronymic, the genitive is always formed by adding, to the exact and complete name, an *i* if the person is a man, or an *ae* if the person is a woman, even if the name has a Latin form. . . . Examples: . . . *möbiusi*, . . . *bosi* (not *bovis*), *salmoni* (not *salmonis*)." To a botanist with even a smattering of Latin, it would appear that zoologists are compelled to illiteracy by legislative fiat—and by quite inconsistent regulations at that.

Botanists may find it strange also that names of subgenera are treated as of equal value (and are frequently used interchangeably) with those of genera, and of subspecies with those of species—going beyond a peculiarity of the American Code long since abandoned by botanists. Up to the present, there has been no provision in the zoological rules for names of groups below the rank of subspecies—a fact often overlooked by botanists who desire to substitute the term subspecies for variety in botanical nomenclature. (Provision for subspecific groups is to be added to the next edition of the zoological rules.) Those who believe that zoologists never capitalize specific names may be surprised by Article 13: "While specific substantive names derived from names of persons may be written with a capital initial letter, all other specific names are to be written with a small initial letter. Examples: *Rhizostoma Cuvieri* or *Rh. cuvieri*, *Francolinus Lucani* or *F. lucani*."

I hope that the above example and quotations will suggest to botanists the unwisdom of pinning hopes for progress upon dictatorial regulations, or of attempting to modify the botanical rules after the model of the zoological ones, without understanding the history of and present practice under the latter. The zoologists long ago adopted an official list of generic names, to which names of species are now to be added. The present state of systematic entomology is far behind that of systematic botany, as might be expected from the enormously large number of species

of insects, and the relatively small number of monographers working on them. The troubles which led to Pate's angry protests, quoted above, are very possibly a forerunner of many more likely to confront the entomologists because of the Official List and other features of the zoological rules. Surely there is much food for thought in Dr. Fosberg's remark that in the botanical rules the principle of priority and the type method "are the only fundamentally objective features in the rules of nomenclature, and are the bulwarks standing between an orderly and understandable system and nomenclatural anarchy." Botanists will do well to drop their legendary inferiority complex (wholly unjustified by their accomplishments in systematics), and follow closely the spirit of Article 6 of their rules (quoted almost word for word in Article 1 of the zoological code): "Botanical nomenclature is independent of zoological nomenclature." The zoologists have adopted arbitrary rules, then permitted a group of individuals to suspend them as occasion arises. The results have not been altogether happy. Botanists may well heed Dr. Smith's admonitions against what is likely to be "an impractical solution of a problem which is approaching clarification by the normal procedures of careful monographic and bibliographic work in plant taxonomy."

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RANGE-EXTENSIONS AND -CLARIFICATIONS IN NEW HAMPSHIRE

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It seems advisable to record range data for a miscellaneous assemblage of New Hampshire species of vascular plants collected by the authors or brought to their attention during recent years.

1. *RANUNCULUS FASCICULARIS* Muhl.

On May 15, 1948, the senior author and K. W. Woodward collected this buttercup near the summit of the middle member of the Pawtuckaway Mountains in the township of Nottingham. The habitat was a warm southern slope dominated by *Carya ovata* and *Ostrya virginiana*—the elevation somewhat more than